West Virginia Department of Environmental Protection
Division of Air Quality

Fact Sheet

For Final Renewal Permitting Action Under 45CSR30 and Title V of the Clean Air Act

Permit Number: **R30-00500020-2012**
Application Received: **June 2, 2011**
Plant Identification Number: **005-00020**
Permittee: **Cranberry Pipeline Corporation**
Facility Name: **Danville Compressor Station**
Mailing Address: **Suite 401, Five Penn Center West**
Pittsburgh, Pa 15276-0120

Physical Location:	Danville, Boone County, West Virginia
UTM Coordinates:	422.07 km Easting • 4,214.25 km Northing • Zone 17
Directions:	Travel south on US-119 toward Madison. Bear left onto CR-7/03 (Left Fork) for approximately 2.4 miles. Turn left on CR-119/07 (Lick Creek) for approximately 0.9 miles to the station entrance.

Facility Description

Danville Compressor Station is a natural gas production facility covered by Standard Industrial Classification (SIC) Code 1311. The station has the potential to operate twenty-four (24) hours per day, seven (7) days per week, fifty-two (52) weeks per year. The station consists of one (1) TEG dehydrator with flare, one (1) dehydrator reboiler, three (3) 400 HP natural gas compressor engines, one (1) 800 HP natural gas compressor engine, two (2) 810 HP natural gas compressor engines, one 155 hp emergency generator and two (2) storage tanks of various sizes.

Emissions Summary

Plantwide Emissions Summary [Tons per Year]

Regulated Pollutants	Potential Emissions	2010 Actual Emissions
Carbon Monoxide (CO)	50.18	49.72
Nitrogen Oxides (NO_X)	233.58	231.58
Particulate Matter (PM_{10})	3.62	3.59
Total Particulate Matter (TSP)	3.62	Not reported
Sulfur Dioxide (SO_2)	0.08	0.07
Volatile Organic Compounds (VOC)	16.14	15.86

PM_{10} is a component of TSP.

Hazardous Air Pollutants	Potential Emissions	2010 Actual Emissions
Formaldehyde	6.25	6.18
Total HAPs	9.15	8.98

Some of the above HAPs may be counted as PM or VOCs.

Title V Program Applicability Basis

This facility has the potential to emit 233.58 tons per year of Nitrogen Oxide. Due to this facility's potential to emit over 100 tons per year of criteria pollutant, Cranberry Pipeline Corporation is required to have an operating permit pursuant to Title V of the Federal Clean Air Act as amended and 45CSR30.

Legal and Factual Basis for Permit Conditions

The State and Federally-enforceable conditions of the Title V Operating Permits are based upon the requirements of the State of West Virginia Operating Permit Rule 45CSR30 for the purposes of Title V of the Federal Clean Air Act and the underlying applicable requirements in other state and federal rules.

This facility has been found to be subject to the following applicable rules:

Federal and State:	45CSR2	Indirect Heat Exchangers
	45CSR6	Open burning prohibited.
	45CSR10	Emission of sulfur oxides
	45CSR11	Standby plans for emergency episodes.
	45CSR13	Construction Permit
	45CSR16	New stationary sources.
	WV Code § 22-5-4 (a) (14)	The Secretary can request any pertinent information such as annual emission inventory reporting.
	45CSR30	Operating permit requirement.
	40 C.F.R. Part 60, Subpart JJJJ	Stationary spark ignition IC engines.
	40 C.F.R § 60.18	NSPS Flare requirements
	40 C.F.R. Part 61	Asbestos inspection and removal
	40 C.F.R. Part 63, Subpart ZZZZ	RICE MACT
	40 C.F.R. Part 63, Subpart HH	Oil and Natural Gas Production Facilities MACT

	40 C.F.R. Part 82, Subpart F	Ozone depleting substances
State Only:	45CSR4	No objectionable odors.
	45CSR17	Control fugitive particulate matter

Each State and Federally-enforceable condition of the Title V Operating Permit references the specific relevant requirements of 45CSR30 or the applicable requirement upon which it is based. Any condition of the Title V permit that is enforceable by the State but is not Federally-enforceable is identified in the Title V permit as such.

The Secretary's authority to require standards under 40 C.F.R. Part 60 (NSPS), 40 C.F.R. Part 61 (NESHAPs), and 40 C.F.R. Part 63 (NESHAPs MACT) is provided in West Virginia Code §§ 22-5-1 *et seq.*, 45CSR16, 45CSR34 and 45CSR30.

Active Permits/Consent Orders

Permit or Consent Order Number	Date of Issuance	Permit Determinations or Amendments That Affect the Permit *(if any)*
R13-2585B	02/26/2010	

Conditions from this facility's Rule 13 permit(s) governing construction-related specifications and timing requirements will not be included in the Title V Operating Permit but will remain independently enforceable under the applicable Rule 13 permit(s). All other conditions from this facility's Rule 13 permit(s) governing the source's operation and compliance have been incorporated into this Title V permit in accordance with the "General Requirement Comparison Table B" which may be downloaded from DAQ's website.

Determinations and Justifications

Boilerplate changes: The following changes have been made due to boilerplate changes:

a. Section 2.1.4 has been added to define “rolling yearly total”.
b. Section 3.1.1 has been changed to reflect new 45CSR§6-3.1 language.
c. Section 3.1.2 has been changed to reflect new 45CSR§6-3.2 language.
d. Section 3.1.3 regarding asbestos and the citation of the section have been changed due to change in boilerplate.
e. Paragraph d has been added to section 3.3.1 to reflect boilerplate change requiring reporting of stack test results.
f. Sections 3.5.3 and 3.5.5 are changed to include electronic report submittal to EPA.

Changes to the existing permit besides boilerplate changes:

1. 40 C.F.R. Part 63 Subpart HH – National Emission Standards for Hazardous Air Pollutants from Oil and Natural Gas Production Facilities.

    a) Applicability and designation of affected source:

    First, it should be noted that the applicability of this MACT is not limited only to major sources of HAPs; area sources may also be subject. The rule applies to an owner or operator of emission points listed under 40 C.F.R. §63.760(b) located at facilities that meet the applicability criteria 40 C.F.R. §§63.760(a)(1) and either (a)(2) or (a)(3) of that section.

    Criterion 40 C.F.R. §63.760(a)(1) applies to, “Facilities that are major or area sources of hazardous air pollutants (HAP) as defined in 40 C.F.R. §63.761.” The facility is not a major source of HAPs; therefore, it is an area source in accordance with the definition of area source under 40 C.F.R. §63.2. The facility meets the first criterion.

Criterion 40 C.F.R. §63.760(a)(2) applies to, "Facilities that process, upgrade, or store hydrocarbon liquids prior to the point of custody transfer." The facility does not process hydrocarbon liquids as defined in 40 C.F.R. §63.761; therefore, it does not meet this criterion.

Criterion 40 C.F.R. §63.760(a)(3) applies to, "Facilities that process, upgrade, or store natural gas prior to the point at which natural gas enters the natural gas transmission and storage source category or is delivered to a final end user. For the purposes of this subpart, natural gas enters the natural gas transmission and storage source category after the natural gas processing plant, when present. If no natural gas processing plant is present, natural gas enters the natural gas transmission and storage source category after the point of custody transfer." Clearly, this facility processes natural gas. Furthermore, it processes the natural gas prior to the point that the gas enters the transmission and storage source category.

Danville Compressor Station meets the facility applicability criteria 40 C.F.R. §§63.760(a)(1) and (a)(3). The particular emission point that is subject to Subpart HH is covered by 40 C.F.R. §63.760(b)(2), which "includes each triethylene glycol (TEG) dehydration unit located at a facility that meets the criteria specified in paragraph (a) of this section." According to the Process Description included with the application, "After compression, the wet gas is transferred to a triethylene glycol (TEG) dehydration unit, where excess water is removed from the natural gas stream…." Since the facility's dehydration unit is a triethylene glycol dehydration unit, it meets the applicability criterion set forth in 40 C.F.R. §63.760(b)(2), and as such Dehy (001-09) is subject to the applicable requirements of 40 C.F.R. 63 Subpart HH.

The facility is not located in an Urban-1 county as defined in 40 C.F.R. §63.761. Since the measured distance of the facility is more than 2 miles from the census 2000 Urban Area, the compressor station is not located within a UA plus offset and UC area, as defined in 40 C.F.R. §63.761.

The dehy was constructed in 2004.

Based upon these criteria, and in accordance with 40 C.F.R. §63.760(f)(5), the Subpart HH compliance date is January 5, 2009. Refer to permit condition 6.1.21. The permit condition 6.1.21 has been added in accordance with 40 C.F.R. §63.760.

b) Applicable Subpart HH General Standards:

Permit conditions 6.1.22, 6.1.23, 6.2.5, 6.3.1, 6.3.2, 6.4.6, 6.4.7 & 6.5.1 have been added to incorporate 40 C.F.R. 63 Subpart HH standards applicable to this facility. Detailed discussions are stated below:

Permit condition 6.1.22 has been added to address 40 C.F.R. §63.764 requirements.

Since the compressor station is not located within a UA plus offset and UC, it appears that requirements of 40 C.F.R. §63.764(d)(2) would apply to the dehydration unit. However, the dehydration unit meets the exemption criterion in 40 C.F.R. §63.764(e)(1)(ii); therefore, the dehydration unit is not subject to 40 C.F.R. §63.764(d).

According to 40 C.F.R. §63.764(e)(1), the permittee must maintain records of the determination of these criteria in accordance with 40 C.F.R. §63.774(d)(1). Since the benzene emissions justify the exemption, 40 C.F.R. §63.774(d)(1)(ii) (condition 6.4.7) is the applicable requirement to maintain records of actual average benzene emissions as determined in accordance with 40 C.F.R. §63.772(b)(2) (condition 6.3.2). Furthermore, there are specific methods under 40 C.F.R. §63.772(b) that must be adhered to in order to verify the criteria for this exemption.

The facility meets the exemption criteria under 40 C.F.R. §63.764(e)(1)(ii); therefore, records of actual average benzene emissions must be kept pursuant to 40 C.F.R. §63.774(d)(1) [Section 6.4.7 has been added to permit in accordance with 40 C.F.R. §63.764(d)(1)].

Section 6.1.23 has been added to make the permittee aware that if benzene emissions from the dehy exceed 1 tpy of benzene, the dehy will be subject to 40 C.F.R. §63.764(d) (2) (i) through (iii) (in section 6.1.22 of the permit).

Section 6.2.5 is added for monitoring and recording actual operating parameters associated with the dehydration system in order to demonstrate compliance with the area source status, as well as the 1 ton per year benzene exemption provided under 6.1.22(e)(1)(ii) using GRI-GLYCalc V3 or higher.

Section 6.3.1 has been added for sampling and analyzing the wet gas composition which will be used as input to GRI-GLYCalc in section 6.2.5.

Section 6.4.6 has been added to maintain records of all monitoring data, wet gas sampling, and annual GLYCalc emission estimates for the purpose of documenting compliance with the emission limitations, HAP major source thresholds, as well as the 1 ton per year benzene exemption.

Section 6.5.1 has been added for the permittee to submit by March 31st of the following year, an emission summary for the dehydration unit (DEHY) and shall include an actual annual average emission estimate for the calendar year of the sample.

2. Flare Testing:

Due to successful compliance testing of the flare in 2006 to show compliance with 40 C.F.R. §60.18(f), Sections 6.3.1 and 6.3.2 of the existing permit were deleted. The flare testing results stated that the assist gas flow rate has to be at least 7000 scfd to show compliance with the section 6.1.6 requirement for the net heating value of gas being combusted being 300 Btu/scf; hence sections 6.2.6 and 6.4.8 are being added to assure that assist gas (natural gas) flow rate fed to the flare shall not be less than 7000 scfd.

3. Compliance Plan:

The permittee sampled and performed a new wet gas analysis on August 1, 2011. The new gas analysis and subsequent GLYCalc emissions report showed a violation of R13-2585B limits for Hexane, Toluene and Xylene as shown in the following table:

Pollutant	45CSR13 permit limit		GlYCalc results based on new gas analysis	
	Lb/hr	tpy	Lb/hr	tpy
Benzene	0.0032	0.014	0	0
Hexane	0.002	0.009	0.0273	0.1196
Toluene	0.005	0.02	0.0318	0.1391
Xylene	0.005	0.02	0.052	0.2278

Section 6.6.1 has been added for a compliance plan which states that the permittee shall submit a 45CSR13/Title V modification to reflect the change in emissions as predicted using the recent wet gas analysis taken on August 1, 2011.

4. 40 C.F.R. 63 Subpart ZZZZ - This rule is applicable to facilities that own or operate stationary reciprocating internal combustion engines (RICE) at major and area sources of HAP. A major source of HAP emissions is a plant site that has a potential to emit 10 tons/yr of a single HAP, or 25 tons/yr aggregate HAPs. An area source of HAP emissions is a source that is not a major source. This facility has the potential to emit less than 10 tons/yr single HAP, and 25 tons/yr aggregate HAPs; hence this facility is an area source of HAPs.

a) Applicability of 40 C.F.R. 63 Subpart ZZZZ to EG-1**:** Emergency Generator EG-1 will be considered a new engine at an area source since construction commenced in 2010. Per 40 C.F.R. §63.6590(c) (Section 8.1.3 of the permit), the engine shall meet the requirements of subpart ZZZZ by meeting the requirements of 40 C.F.R. Part 60, Subpart JJJJ. No further requirements apply under Subpart ZZZZ.

b) Applicability of 40 C.F.R. 63 Subpart ZZZZ to Engines #1, 2, 3 & 4 (Emission point ID(s): 001-02, 001-03, 001-05 & 001-06) –

Section 10 has been added to the permit to specify which sections of 40 C.F.R. 63 Subpart ZZZZ are applicable to Engines #1, 2, 3 & 4. Engines #1, 2 & 3 are existing (Constructed before 6-12-2006) non-emergency SI 2SLB < 500 HP located at an Area Source of HAP. Engine # 4 is an existing (Constructed before 6-12-2006) non-emergency SI 2SLB > 500 HP located at Area Source of HAP.

Section 10.1.1 of the permit – These are existing stationary SI RICE (constructed before 6-12-2006) located at an area source of HAP emissions and according to 40 C.F.R. §63.6595, **the** permittee must comply with the applicable emission limitations and operating limitations no later than October 19, 2013; Also the permittee must meet the applicable notification requirements in 40 C.F.R. §63.6645 and in 40 CFR part 63, subpart A.

Sections 10.1.2 to 10.1.5, 10.2.1, 10.4.1 & 10.5.1 have been added to the permit to address applicable sections of 40 C.F.R. 63 Subpart ZZZZ.

In section 10.1.2 (a) reference to operation limitations in Table 1b and 2b is taken out because they are not applicable.

c) Applicability of 40 C.F.R. 63 Subpart ZZZZ to Engines # CE-5 & CE-6 (Emission point ID(s): 001-10 & 001-11) –

Section 11 has been added to the permit to specify which sections of 40 C.F.R. 63 Subpart ZZZZ are applicable to Engines # CE-5 and CE-6. Engines # CE-5 & CE-6 are existing (Constructed before 6-12-2006) non-emergency SI 4SLB > 500 HP located at Area Source of HAP.

Section 11.1.1 of the permit - This is an existing stationary SI RICE (constructed before 6-12-2006) located at an area source of HAP emissions and according to 40 C.F.R. §63.6595, the permittee must comply with the applicable emission limitations and operating limitations no later than October 19, 2013. Also the permittee must meet the applicable notification requirements in 40 C.F.R. §63.6645 and in 40 C.F.R. Part 63, subpart A.

Sections 11.1.2 to 11.1.7, 11.2.1, 11.3.1 to 11.3.3, 11.4.1 & 11.5.1 to 11.5.2 have been added to the permit to address applicable sections of 40 C.F.R. 63 Subpart ZZZZ.

5. Flare is subject to 45CSR§6-4.3. Section 6.1.1 has been changed to streamline 45CSR§6-4.3 requirements with 40 C.F.R. §60.18 requirements.

6. Section 9.0 (40CFR60 Subpart JJJJ requirements for EG-1) has been modified to eliminate requirements not applicable to EG-1.

Non-Applicability Determinations

The following requirements have been determined not to be applicable to the subject facility due to the following:

There are no Greenhouse Gas Clean Air Act requirements for this facility because the facility has not made any changes that triggered a PSD permit modification.

40 CFR 64 (CAM Rule) – This is the second permit renewal for this facility. The facility was found not to be subject to CAM at the time of first renewal.

Since the last renewal a 155.2 hp Kohler generator was added in 2010. The catalytic converter for this generator is inherent process equipment according to the definition in 40 C.F.R §64.1 and is not a control device; hence according to 40 C.F.R §64.2, CAM is not applicable to this generator.
Flare was installed in 2005. Potential emissions of VOC and HAPs from dehydration unit were below major source threshold before the flare was installed; hence according to 40 C.F.R §64.2, CAM is not applicable to the flare.

Request for Variances or Alternatives

None

Insignificant Activities

Insignificant emission unit(s) and activities are identified in the Title V application.

Comment Period

Beginning Date:	November 23, 2011
Ending Date:	December 23, 2011

All written comments should be addressed to the following individual and office:

U.K.Bachhawat
Title V Permit Writer
West Virginia Department of Environmental Protection
Division of Air Quality
601 57th Street SE
Charleston, WV 25304

Procedure for Requesting Public Hearing

During the public comment period, any interested person may submit written comments on the draft permit and may request a public hearing, if no public hearing has already been scheduled. A request for public hearing shall be in writing and shall state the nature of the issues proposed to be raised in the hearing. The Secretary shall grant such a request for a hearing if he/she concludes that a public hearing is appropriate. Any public hearing shall be held in the general area in which the facility is located.

Point of Contact

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Division of Air Quality
601 57th Street SE
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Response to Comments (Statement of Basis)

Not applicable.